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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,729

06/05/2006

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EXAMINER

JONES, CHRISTOPHER P

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

08/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,729	Applicant(s) TOKUNO ET AL.	
	Examiner CHRISTOPHER P. JONES	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20060605, 20070117, 20090626</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Translation of JP2000-064073A, Translation of JP2001-248794A.</u> |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-9, in the reply filed on 06/29/2009 is acknowledged.
2. Claims 10-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected product, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/29/2009.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Murai* JP2001-248794 A [Translation].
5. Regarding claims 1 and 3, *Murai* discloses an apparatus comprising: a processing part having a processing space adapted to contain a process object therein (figure 1, object 10); an ozone generator adapted to generate ozone gas from an oxygen-containing gas through an electric discharge (paragraph 20); an ozone supply line adapted to supply the ozone gas generated by the ozone generator into the processing space of the processing part (paragraphs 28 and 29); a first steam generator

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adapted to generate water vapor (paragraph 24); a first steam supply line connected to the ozone supply line to supply the water vapor generated by the first steam generator into the ozone supply line (paragraph 24); and a trap arranged in the ozone supply line at a portion thereof downstream of a joint between the ozone supply line and the first steam supply line, the trap containing an adsorbent composed of chips of a silicon-containing material (paragraph 24).

6. *Murai* does not explicitly disclose that the trap is metal. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the trap be made of metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

7. Regarding claim 3, in the alternative, if *Murai* does not explicitly disclose that the silicon-containing material is in the form of chips, it nevertheless would have been an obvious matter of design choice to use chips, since applicant has not disclosed that this form of silicon-containing material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a gel.

8. Regarding claims 4 and 7, *Murai* discloses a cooler arranged in the ozone supply line at a portion thereof downstream of the trap to cool a mixed fluid containing the ozone gas and the water vapor; and a gas-liquid separator arranged in the ozone supply line at a portion thereof downstream of the cooler to separate the ozone gas contained in the mixed fluid cooled by the cooler from condensed water generated by cooling the water vapor (paragraph 24).

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9. Regarding claim 5, 6, and 8 *Murai* does not explicitly disclose a second stream generator, a second steam supply line, a second cooler, and a second gas-liquid separator. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second stream generator, a second steam supply line, a second cooler, and a second gas-liquid separator, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. MPEP 2144.04 (VI-B).

10. Regarding claim 9, *Murai* discloses that the condensed water is to be removed from the ozone gas (paragraph 24). *Murai* does not explicitly disclose a tank to hold the water, whereby, when the condensed water and the ozone gas pass through the water in the tank, the condensed water is mixed to the water in the tank to be separated from the ozone gas. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a water tank since it was well known in the art that water can be removed from a gas in this manner.

11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Murai* JP2001-248794 A [Translation] in view of *Wada* JP2000-064073 A [Translation].

12. *Murai* is relied upon as above.

13. Regarding claim 2, *Murai* does not explicitly disclose that the adsorbent is composed of pure silicon or SiO₂. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the adsorbent

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be composed of SiO.sub.2, since it was known in the art that SiO.sub.2 is an adsorbent readily capable of removing contaminants from ozone (see *Wada* paragraph 17).

14. Regarding claim 3, *Wada* discloses that the SiO.sub.2 can be in the form of pellets/chips (see *Wada* paragraph 22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the SiO.sub.2 in the form of chips since it was known in the art that this is a suitable form to function as an adsorbent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER P. JONES whose telephone number is (571)270-7383. The examiner can normally be reached on Monday - Thursday, 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571)272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. P. J./
Examiner, Art Unit 1797

/DUANE SMITH/
Supervisory Patent Examiner, Art
Unit 1797